★ **Test Information**

Description	
Instructions	
Multiple Attempts	This test allows multiple attempts.
Force Completion	This test can be saved and resumed later.
	Your answers are saved automatically.

QUESTION 1

0.02 points   ✔ Saved

The Bayes theorem says that the probability of an [event A ⇕] conditional to another [event B ⇕] is equal to the [probability of B ⇕] given event A [times the probability of A ⇕] over the marginal probability of B

QUESTION 2

0.02 points   ✔ Saved

Following the Bayes Theorem, $p(w|y,x)$ is proportional to [the likelihood of y ⇕] conditional to x and [w ⇕] times [the prior probability ⇕] [of w ⇕]

QUESTION 3

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In order to find the posterior distribution of the parameters of a linear Gaussian process, we followed the next steps:
0. We assume that the error process is a sequence of identically distributed variables with Gaussian distribution of zero mean.

[2. ⇕]

With this in mind, we construct a likelihood for observation y given x and w, which results in a Gaussian distribution.

[3. ⇕]

Then, the joint likelihood can be constructed as a product of the previous Gaussian distributions

[1. ⇕]

The probability of w conditional to x and y is proportional to the product of the likelihood of y conditional to x and w and the prior of w

QUESTION 4

0.02 points   ✔ Saved

The maximum a posteriori solution of the weight vector of a linear Gaussian process contains

○ the inverse of a matrix which is proportional to the sample approximation of the input data autocorrelation matrix, plus a regularization term which is represented by the covariance matrix of the weight vector prior.

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QUESTION 5

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The predictive posterior of the Gaussian process is

○ the prediction of the output y given the input x.

● the distribution of the latent variable f given the input x and the training data X, Y, which gives the user a confidence interval of the prediction.

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○ the prediction of latent variable f given the input x.

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